

Abstract

The present invention provides a complex oxide having a composition represented by the formula $\text{La}_v\text{M}^1_w\text{Ni}_x\text{M}^2_y\text{O}_z$; wherein M^1 is at least one element selected from the group consisting of Na, K, Sr, Ca, Bi and Nd; M^2 is at least one element selected from the group consisting of Ti, V, Cr, Mn, Fe, Co and Cu; and the subscripts are numbers which respectively satisfy $0.5 \leq v \leq 1.2$; $0 \leq w \leq 0.5$; $0.5 \leq x \leq 1.2$; $0.01 \leq y \leq 0.5$; and $2.8 \leq z \leq 3.2$. The complex oxide of the invention has a negative Seebeck coefficient and a low electrical resistivity, i.e., an electrical resistivity of 10 m Ω cm or less, at 100°C or higher and is a novel material with an excellent performance as an n-type thermoelectric material.